



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII, MONTANA OFFICE
FEDERAL BUILDING, 301 S. PARK, DRAWER 10096
HELENA, MONTANA 59626-0096

1069064 - R8 SDMS

INSPECTION REPORT

FACILITY: Asarco East Helena Plant
P.O. Box 1230, E. Helena, MT 59635
EPA ID # MTD006230346
Telephone (406) 227-7191

RESPONSIBLE OFFICIAL: Jon Nickel, Environmental Supervisor

INSPECTION PARTICIPANTS: Richard Knatterud, WMD; Paul Montgomery
and Stephanie Wallace, EPA

DATE OF INSPECTION: January 5, 1995

PURPOSE OF INSPECTION: To evaluate Asarco's compliance with RCRA requirements. This was the first of at least a two-part RCRA inspection. The first part was intended primarily to determine the regulatory status of the wastewater treatment system, including the Lower Lake surface impoundment, as well as the status of secondary materials received by Asarco, stored and smelted on-site.

FACILITY DESCRIPTION: Asarco is a primary lead smelter occupying approximately 80 acres in East Helena, Montana. The smelter has been in operation since the late 1800's. The smelter produces primary lead bullion and copper matte and speiss which are further refined at other Asarco facilities. Source materials for the smelter include virgin ores as well as non-virgin (secondary) metal-bearing materials. The facility also operates an acid plant which produces 93% food grade sulfuric acid.

RESULTS OF INSPECTION: The inspection team arrived at the Asarco facility at 8:30 AM and met with Jon Nickel to discuss the purpose of our visit. Our expressed purpose was to discuss the following topics: 1. wastewater flows; 2. recycled secondary (non-virgin) materials; 3. street sweepings from E. Helena; 4. dust suppression; 5. generator activities; and 6. management of lead acid batteries and precious metals. We determined that our evaluation of generator activities and lead acid batteries would be deferred until another day in order to focus on the other topics. The day was partly cloudy and very cold with temperatures near minus ten degrees fahrenheit when we arrived.

1. Waste water flows - Mr. Nickel reviewed the facility's wastewater flow system and the history of changes to the system as a result of CERCLA involvement. The latest flow diagram produced by Asarco, dated 1993 and provided in the EPA Water Management Division's June 1994 "Final Compliance Evaluation Inspection Report, Asarco Inc., E. Helena Primary Lead Smelter,"

is out-of-date, however, the inspection report provides a description of the processes. The following description, as related by Mr. Nickel, discusses only certain elements of the system.

Two types of water are produced at the plant, plant water and process water. The discussion focussed primarily on process water from acid plant scrubber blowdown. Acid plant scrubber blowdown water is passed through a clarifier. Solids removed from the unit are filter-pressed and returned to the blast furnace via a direct feed. After clarification, the water is routed to two, 40,000 gallon storage tanks. The water may then go to the acid scrubber reclamation unit (which began operation in late 1991) or to the High Density Sludge (HDS) treatment system.

All wastewater that goes through the acid scrubber reclamation system goes back to the sinter plant in a continuous loop. Water which goes through the HDS is discharged to Lower Lake. Lower Lake is a surface impoundment which has received untreated water in the past. The HDS outflow has a composite sampler with which Asarco takes daily, weekly and monthly samples. Treated effluent from the HDS does not exceed TCLP for metals. The HDS was commissioned in 1994 and operates intermittently; only when excess water must be handled. Acid plant process water is diluted with nine parts plant water in the HDS. Asarco had originally intended to discharge water from the HDS to the E. Helena POTW, but couldn't meet the discharge limits. In the past, occasional overflows from the HDS were sent to the two, one million gallon tanks and occasionally dumped to Lower Lake. Sludge from the HDS is run through a filter press, temporarily stored in a bin (for a few days at most) and transported by front end loader to the blast furnace for recycling. This material has recoverable quantities of Pb, Cd, Cu, and Zn. Mr. Nickel believes the composition of the cake compares favorably to ore.

Sinter plant washdown water, along with many other waste streams, goes directly to Thornock Tank and is recirculated unless partly used as HDS dilution water. Thornock Tank was constructed in accordance with RCRA tank rules. Before October 1994, Thornock Tank (to which all plant water gravity drains) discharged directly to Lower Lake. At that time the water was RCRA hazardous for arsenic (this is the only constituent Asarco routinely analyzed for). According to Mr. Nickel, Asarco was aware that the water was hazardous but believed that the discharge was protected under CERCLA. Prior to the construction of the one million gallon tanks in 1990, Asarco routinely discharged directly to Lower Lake. Mr. Nickel also stated that Asarco believes that Lower Lake is part of an internal water recycling process and not subject to the Clean Water Act. Asarco plans to discontinue using Lower Lake once the contaminated sludge and sediments have been removed and the Lake water has

been treated in accordance with a CERCLA Record of Decision. Asarco has applied for an MPDES permit to discharge HDS treated water directly to Prickly Pear Creek, which it expects to begin doing in 1997.

2. Recycled secondary materials - non-virgin materials (classified as high-grades, precious metals, and sweeps) are smelted for metal recovery along with virgin ores. All secondary materials are sampled by fire assay upon receipt at the E. Helena facility. If these materials are low in sulfur, they can go to the blast furnace as direct charge material. If high in sulfur, they must first go through the sintering process for sulfur removal. According to Mr. Nickel the secondary materials do not sit around for very long. A typical storage time is 20-30 days which is documented by Mr. Nickel. Mr. Nickel prepares an annual summary of the residence time of each material received and offered to send us a copy of the latest report. The report documents the date received in E. Helena and the date smelted, the pile ID number and the material name.

Mr. Nickel stated that Asarco does not accept any manifested waste at the E. Helena facility and the company pays for all materials received. He did not believe that Asarco was paid to receive any material at the E. Helena smelter.

3. Street sweepings - The E. Helena lead SIP requires that lead dust levels be controlled on E. Helena roads. The roads are therefore swept and Asarco plans to unload the sweepings in the ore storage building at the facility before running them through the smelter. The ore storage building is kept under negative pressure. Mr. Nickel stated that the sweepings test RCRA hazardous for lead, but they are not really an effective substitute for ore because they tend to contain a lot of street sand. The inspection team discussed with Mr. Nickel that the ore storage building might qualify as a containment building under RCRA and that the smelter is exempt under the RCRA Burner Industrial Furnace rules.

4. Dust suppression - Asarco previously used plant water, which tests RCRA hazardous, for dust suppression according to Mr. Nickel. This practice was discontinued last summer when Upper Lake water was substituted. Upper Lake is a diversion of Prickly Pear Creek.

At approximately 10:30 AM the inspection team proceeded into the plant for a site tour guided by Mr. Nickel. We followed the process wastewater flow from its origin, through the scrubber reclamation and HDS facilities to Lower Lake. We also toured the ore storage building and the ore storage area, as well as the smelting process areas. During our inspection of the two areas where filter cake is produced (at the acid plant scrubber water reclamation facility and at the HDS), we observed filter cake on

the ground outside the loading door. Since Mr. Nickel described this material as RCRA hazardous, we informed him that the material should not be placed on the ground.

At 12:20 PM the inspection team conducted an exit briefing with Mr. Nickel. We indicated that another RCRA inspection would be necessary in order to look at points of waste generation such as the laboratory and maintenance shops. In the meantime, we plan to review Asarco's response to a December 1994 EPA request for information under the Clean Water Act which addresses questions relating to the regulatory status of waste water treatment units and secondary materials which are recycled at the smelter. We informed Mr. Nickel that it is possible that Asarco's response could lead to an information request under RCRA authorities. We also informed Mr. Nickel that we would keep in close communication with the EPA Superfund staff in regards to these issues.

At 12:30 PM the inspection team departed the facility.

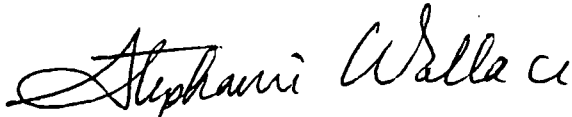
POSSIBLE VIOLATIONS IDENTIFIED

- o Asarco has apparently discharged RCRA hazardous waste to Lower Lake in the past, although wastewaters currently discharged do not fail TCLP. This activity would have made Lower Lake a RCRA-regulated surface impoundment which should have had a RCRA permit to operate. Asarco apparently believes that CERCLA shielded these activities from RCRA regulation.
- o Asarco has apparently sprayed RCRA hazardous waste waters on the ground for dust suppression. This would constitute illegal disposal under RCRA.
- o 40 CFR part 266.70 requires manifesting of transported recyclables which are to be reclaimed to recover economically significant amounts of specified precious metals. Asarco has received and smelted secondary materials which apparently contain precious metals. Since Asarco does not accept materials which are manifested as hazardous waste, it appears that these materials were not manifested.
- o Asarco has placed filter cake from the acid plant scrubber reclamation facility and the HDS unit on the ground. Asarco has stated that this material tests RCRA hazardous, therefore such placement would constitute illegal disposal under RCRA if it is not to be reclaimed. Alternatively, such placement would constitute a violation of 40 CFR section 262.34(a)(1) which requires hazardous waste to be stored in tanks or containers if it is being stored prior to reclamation. In either case, such placement could also constitute a violation of the land disposal restrictions

contained in section 3004(d) of RCRA unless the cake meets the treatment standards set forth in 40 CFR section 268.

- o 40 CFR 264.1(g)(6) exempts wastewater treatment units defined in 40 CFR section 260.10 from regulation under 40 CFR part 264. 40 CFR section 260.10 defines a wastewater treatment unit as a tank or tank system which is part of a wastewater treatment facility that is subject to regulation under either section 402 or 307(b) of the Clean Water Act. Asarco apparently disputes State and EPA assertions that discharges to Lower Lake require an MPDES permit. If discharges to Lower Lake are not regulated under the Clean Water Act, then the tanks used to treat wastewater prior to discharge are not shielded from RCRA regulation under 40 CFR part 264. This is not necessarily a violation, but may indicate that RCRA-compliance should be evaluated.

January 9, 1995
Date of Inspection Report


Stephanie Wallace
EPA Inspector

cc: Richard Knatterud and Bill Potts, WMD
Paul Montgomery
Scott Brown